



Director's Report

National Advisory Council on Minority Health and Health Disparities

May 24, 2022

Eliseo J. Pérez-Stable, M.D.

Director, National Institute on
Minority Health and Health Disparities
eliseo.perez-stable@nih.gov



NIH National Institute
on Minority Health
and Health Disparities

Department of Health and Human Services Updates

- **Robert M. Califf, M.D., MACC**

Commissioner of Food and Drugs, U.S. FDA
Sworn in on February 17, 2022



- **Robert Otto Valdez, Ph.D., M.H.S.A.**

Director, Agency for Healthcare Research and Quality (AHRQ)
Appointment announced in February 2022



White House Updates

Coronavirus Response Coordinator

Ashish Jha, M.D., MPH

- Leads the U.S. government response to the COVID-19 pandemic
- Advances the nation's global health priorities and policies
- Comes to the White House from Brown University where he is the dean of the School of Public Health and a general internist physician



White House Updates

Acting Science Advisor to the President

Francis Collins, M.D., Ph.D.

- Appointment announced February 16 by the White House, less than two months after Collins stepped down as NIH director
- Will serve as science advisor to President Biden and have a Cabinet-level directorship of the White House Office of Science and Technology Policy



NIH Leadership Transition

National Cancer Institute Director Steps Down

NCI Director Norman E. “Ned” Sharpless, M.D.

- Announced decision to leave NCI on April 4, 2022
- Served as the 15th director of NCI
- Also served as Acting Commissioner for Food and Drugs at the U.S. Food and Drug Administration (FDA) for seven months.
- NCI’s Deputy Director, Douglas R. Lowy, M.D., will serve as the NCI Acting Director once more until a new presidential appointment is made



John Lewis NIMHD Research Endowment Revitalization Act of 2021



(L–R): NIH Acting Director Dr. Lawrence A. Tabak; Congresswoman Nanette Diaz Barragán (CA); HHS Secretary Xavier Becerra; Congressman Frank Pallone (NJ); Congresswoman Nikema Williams (GA); and NIMHD Director Dr. Eliseo J. Pérez-Stable.

Photo Credit: The White House

- Signed into law on March 18, 2022
- Expands eligibility for the [NIMHD Research Endowment Program](#) to include former NIMHD and Health Resources and Services Administration Centers of Excellence



Advanced Research Projects Agency for Health (ARPA-H)

Mission

To benefit the health of all Americans by catalyzing health breakthroughs that cannot readily be accomplished through traditional research or commercial activity

Goals

Support transformative high-risk, high-reward research to:

Speed application and implementation of health breakthroughs

- Foster breakthroughs from **the molecular to the societal**
- Build **capabilities and platforms** to revolutionize prevention, treatment, and cures in a **range of diseases**
- Convert **use-driven ideas** into tangible solutions for patients far more rapidly than previously thought possible
- Overcome market failures through **critical solutions or incentives**

Approach



I A R P A
BE THE FUTURE



ARPA-H will be complementary to, not duplicative of, NIH programs and efforts



ARPA-H: Guiding Principles Driving Culture

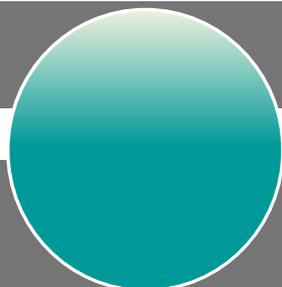
Linked to NIH – draw on vast knowledge, expertise, and infrastructure, but remain distinct, with unique culture and organization



Seek innovative ideas and collaborative, diverse people



Be nimble and urgent, time-bound



Be open and transparent, engage stakeholders



Be milestone driven and independent



Seek boldness with outsized impact



National Institute
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ARPA-H: Path to Innovation

Summer 2021

- OSTP and NIH publish commentary in Science outlining vision for ARPA-H
- Launch engagement activities to gather community feedback

March 2022

- Congress passes and POTUS signs FY22 omnibus with \$1B available for 3 years
- Director is a Presidential appointment
- Hiring and award flexibilities

April 2022

- ARPA-H transferred to NIH
- ARPA-H Director will report to HHS Secretary
- \$5B in FY23 President's budget request



U.S. Surgeon General Vivek Murthy Lecture Series for Public Health Leadership

Guest Speaker: Mayor of Boston Michelle Wu

- Series recognizes public health leaders who have made an impact on advancing public health
- Mayor Wu recognized for her leadership in addressing racism and mental health stigma impacting Asian American and Native Hawaiian/Pacific Islander communities

View archived lecture at

<https://videocast.nih.gov/watch=45154>



NIMHD-NIDDK Rwandan Fellowship Program

M. Grace Duhuze Karera, M.D., MSc

- Sixth Rwandan physician to participate in the NIMHD-NIDDK-Rwandan Health Program
- Presented at the NIMHD DIR seminar on May 11, 2022: “Achieving Diabetes Remission Through Lifestyle Intervention: Implications for Africa”
- Will return to Rwanda this summer and plans to focus on reversing the diabetes epidemic by developing culturally sensitive and effective lifestyle interventions



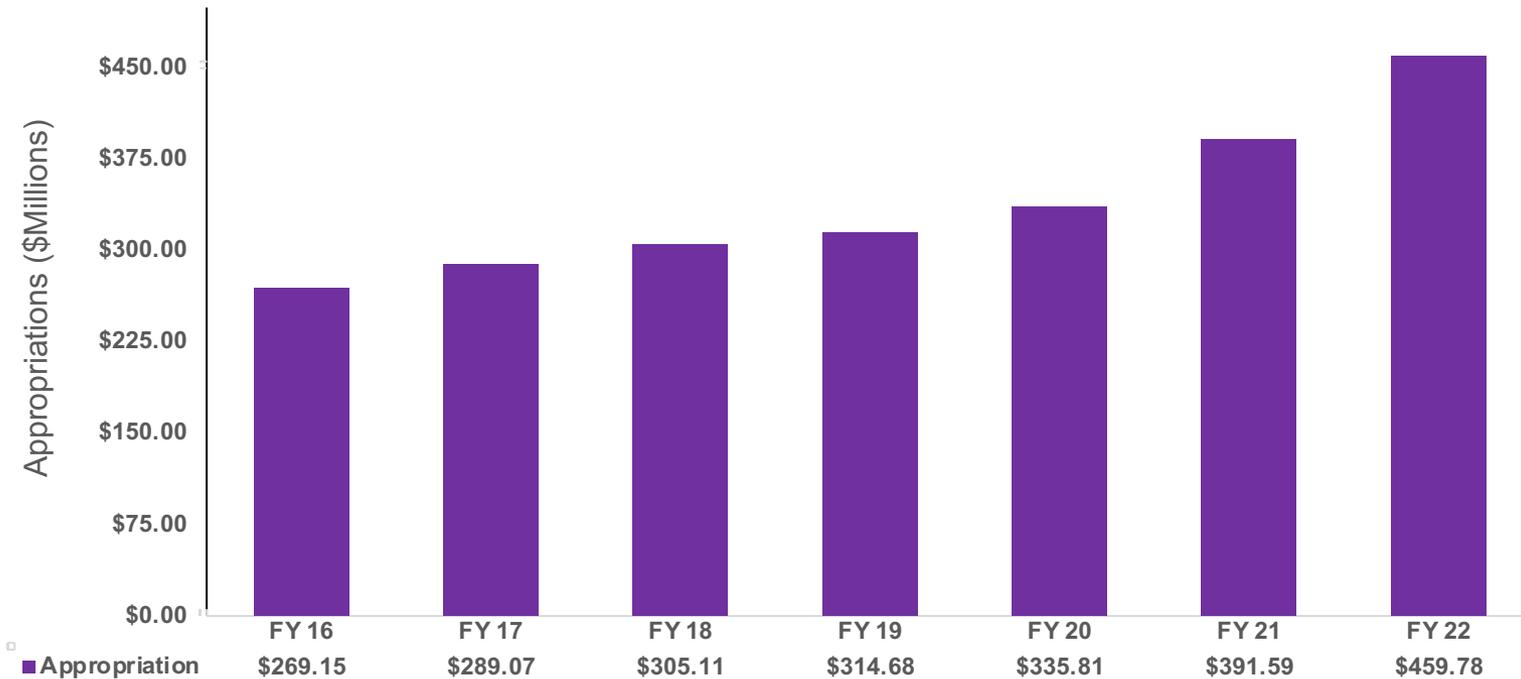
L to R: Drs. Michael Krause, NIDDK; **M. Grace Duhuze Karera**; Anna Nápoles, NIMHD; Anne Sumner, NIDDK Fellowship program chief; Eliseo Pérez-Stable
On screen (virtually): Rwandan Minister of Health, Dr. Agnes Binagwaho

You can watch the hybrid lecture at
<https://videocast.nih.gov/watch=45239>



NIMHD Budget Update

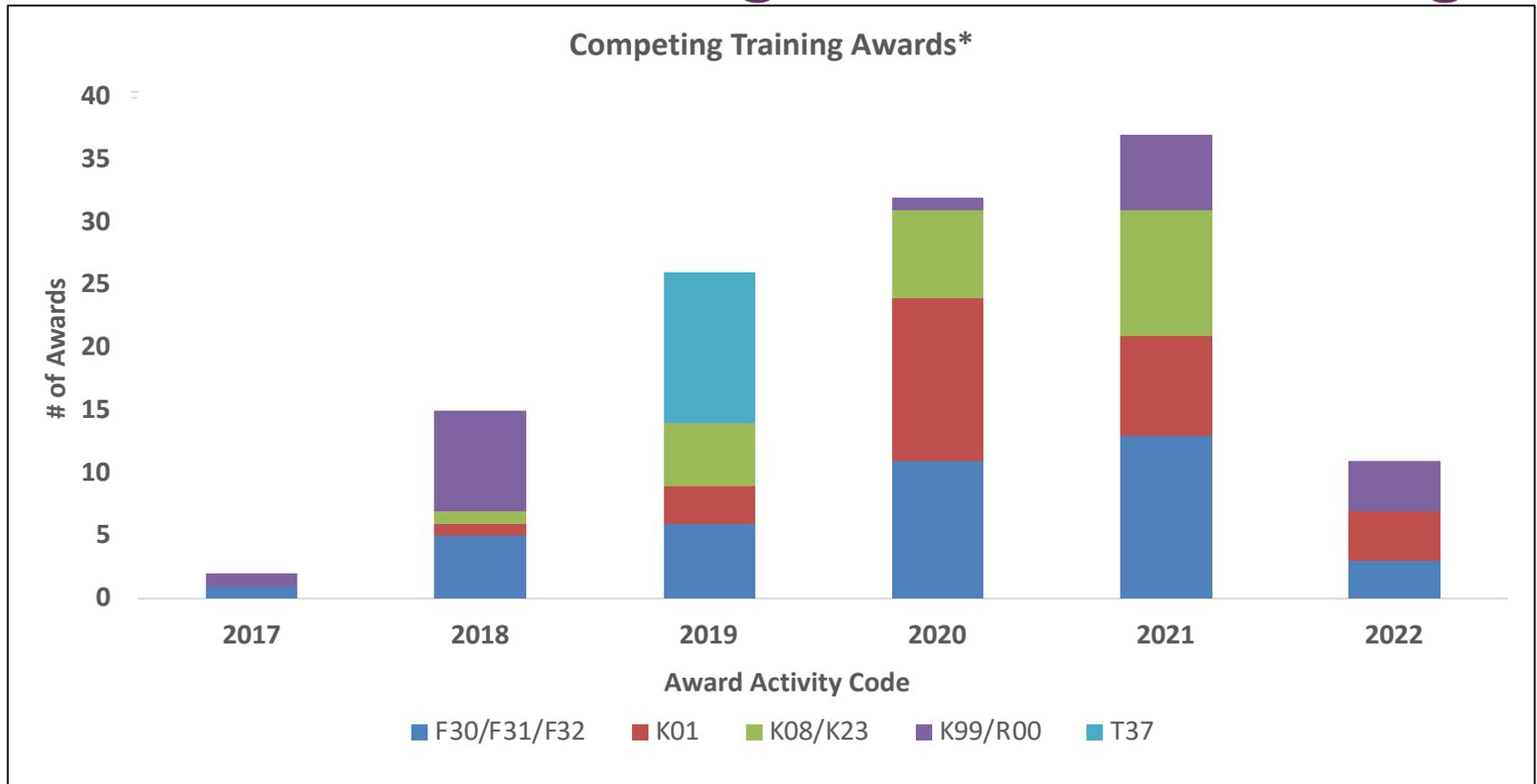
NIMHD Appropriations by FY



https://officeofbudget.od.nih.gov/approp_hist.html



Extramural Funding Trends for Training



- NIMHD Training Awards include:
 - Fellowship Awards (F)
 - Research Training Awards (T)
 - Career Development Awards (K/R00)

*FY2021 Competing Awards as of May 1, 2021



R01 Application Numbers: New Challenge

FY	# of R01 Applications	% R01 Application Increase over Previous FY	Success Rate
2022*	531	7.3%	4.1%
2021	495	13.3%	12.9%
2020	437	11.5%	9.6%
2019	392	39.5%	10.5%
2018	281	23.8%	13.9%
2017	227	83.1%	26.0%
2016	124	-23.5%	26.6%
2015	162		11.2%

*As of May 1, 2022

R01 Applicant Award Rates FY2019-2020 and FY2021 by ESI or Established

	Early Stage		Established	
	FY19-20	FY21	FY19-20	FY21
Total	215	152	420	329
Awarded	29	28	66	68
Rate	13.5%	18.4%	15.7%	20.7%



Legislative Updates

- **February 9, 2022** – Eliseo J. Pérez-Stable, M.D. participated in a briefing with the Appropriations Committees (Four Corners) staff to provide an update on ongoing COVID work with RADx-Underserved Populations (RADx-UP)
- **February 11, 2022** – Eliseo J. Pérez-Stable, M.D. briefed Senate Finance Committee Majority Staff on Data Analytics and Research on health disparities research at NIMHD
- **March 2, 2022** – Nathan Stinson, Jr., M.D., Director, Division of Community Health and Population Science, briefed Rep. David Price's (D-NC) staffer on the Center of Excellence (COE) program and Duke University COE program
- **March 10, 2022** – Eliseo J. Pérez-Stable, M.D. briefed House Energy and Commerce Minority Committee staff on diversity in the workforce and inclusive participation in clinical research



NIMHD Staff Updates

Selection of Director, Office of Extramural Research Activities

Paul Cotton, Ph.D., RDN

- Selected as the Director, Office of Extramural Research Activities and will serve as the Executive Secretary for the National Advisory Council on Minority Health and Health Disparities
- Comes to NIMHD from the National Heart, Lung, and Blood Institute where he served as the lead Program Officer in the Health Inequities and Global Health Branch in the Center for Translation Research and Implementation Science
- Special thanks to Monica Webb Hooper, Ph.D., and Denise Russo, Ph.D., who served in acting capacities while a national search was conducted



NIMHD Staff Updates: New Hires

Division of Clinical and Health Services Research

- Sundania J. Wonnum, Ph.D., BCD, LCSW, Social and Behavioral Sciences Administrator, Program Officer

Office of the Director

- Gina P. Roussos, Ph.D., Social and Behavioral Sciences Administrator, Program Officer

Office of Administrative Management

Krystale Lyons, Administrative Officer



NIMHD Director

Blog Posts/Podcasts/Lectures

- [Boost Your Community: NIMHD's Role in Increasing COVID-19 Vaccine Uptake and Community Interventions](#)
(April 25)
- [NIH FIRST: Strengthening Inclusive Excellence in Biomedical Research](#)
(March 23)
- [Different Kind of Leader](#) podcast blog post
(April 21)



2021 HHS Departmental Awards Rapid Acceleration of Diagnostics (RADx) Initiative

NIMHD Awardees:



- Jennifer Alvidrez
- Richard Berzon
- Dorothy Castille
- Rina Das
- Deborah Duran
- Priscilla Grant
- Monica Webb Hooper
- Beda Jean-Francois
- Nancy Jones
- Maryline Laude-Sharp
- Deborah Linares
- Vanessa Marshall
- Priscah Mujuru
- Eliseo J. Pérez-Stable
- Nishadi Rajapakse
- Fabienne Santel
- Michael Sayre*
- Derrick Tabor*
- Nadra Tyus
- Thomas Vollberg*

* Retired



Rapid Acceleration of Diagnostics Underserved Populations (RADx-UP) by the Numbers

- 127 unique projects funded as competitive revisions, supplements and new U01s
- Coordination and Data Collection Center at Duke/UNC collecting Common Data Elements
- >112,000 unique participants consented and tested with >222,000 tests done
- >1.67 million individual tests abstracted from EHR
- 23 Community Collaboration mini-grants awarded
- 10 Rapid research pilot awards
- >75 projects sharing data with CDCC
- Scientific symposium held on May 3



Research Opportunities to Address Nutrition Insecurity and Disparities

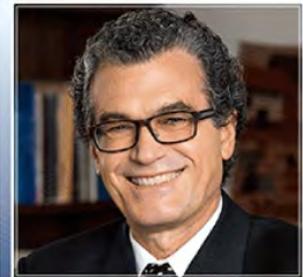
- JAMA Viewpoint article co-authored by
 - National Institute of Nursing Research Director, Shannon N. Zenk, Ph.D., MPH, RN, FAAN
 - NIH Acting Director Lawrence A. Tabak, D.D.S., Ph.D.
 - NIMHD Director, Eliseo J. Pérez-Stable, M.D.
- Discusses the challenges, complexities, and potential opportunities to address diet-related health disparities



Shannon N. Zenk, Ph.D., M.P.H., R.N.



Lawrence A. Tabak, D.D.S., Ph.D.



Eliseo J. Pérez-Stable, M.D.

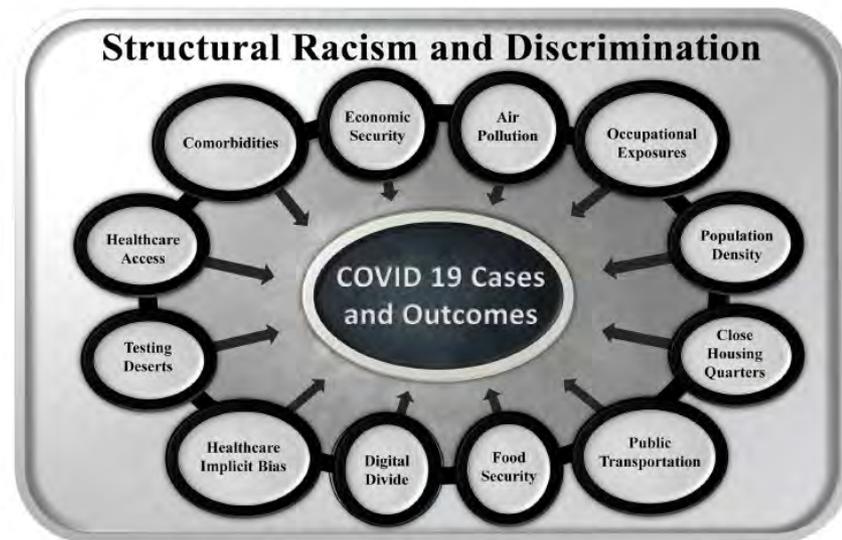
Available at

<https://pubmed.ncbi.nlm.nih.gov/35486390/>



COVID-19 Health Disparities and Adverse Social Determinants of Health

- Article presents an exploratory social determinants of health (SDOH) conceptual framework for understanding racial and ethnic COVID-19 disparities
- The study highlights factors related
 - Health and healthcare
 - Socioeconomics
 - Environmental determinants
- The model also illustrates the backdrop of structural racism and discrimination



Webb Hooper, M., et al., [Behavioral Medicine](#). March 2022.



Journal of Psychiatry

Special issue on Structural Racism and Mental Health Disparities

Guest-edited by NIMHD Health Scientist
Administrator, Crystal L. Barksdale, Ph.D., MPH

- Developed based on work presented at the 2020 National Institute of Mental Health/ NIMHD workshop
- Highlights the negative consequences of structural racism on mental health
- Discusses innovative directions in advancing mental health disparities research



Dr. Barksdale also contributed three articles, including a commentary co-authored with NIMHD Director Eliseo J. Pérez-Stable, M.D., and NIMH Director, Joshua Gordon, MD, PhD, titled, “Innovative Directions to Advance Mental Health Disparities Research”

<https://ajp.psychiatryonline.org/toc/ajp/current>



Treatment for Mild Chronic Hypertension During Pregnancy

- 2,408 pregnant women with mild chronic hypertension
- 28% White, 48% Black, 20% Latina; Mean age=32 years
- **Active-Treatment Group:** receive antihypertensive medication
- **Control Group:** No meds unless moderate hypertension develops

Outcome	Active Treatment	Control
Primary outcome composite	30.2%	37.0%
Severe preeclampsia	23.3%	29.1%
Preterm birth before 35 weeks	12.2%	16.7%
Placental abruption	1.7%	1.9%
Fetal or neonatal death at <28 days	3.5%	4.3%



Older Breast Cancer Survivors and the Benefits of Exercise

- Examined the effect of aerobic and resistance exercise on functional outcomes among older women who are breast cancer survivors by race by socioeconomic status (SES) interaction
- 52-week randomized controlled trial: group exercise intervention vs support group plus Fitbit
- 213 women, Older African American and Hispanic White BCSs, SES-disadvantaged and non-disadvantaged
- Aerobic and resistance exercise appeared to improve physical performance in older breast cancer survivors
- Exercise effect might be moderated by race, with African American women appearing to derive larger benefits in comparison with White women



Financial Incentives May Help to Improve Adult Diabetes Outcomes

- Tested efficacy of financial incentives with tech-based diabetes education intervention on glycemic control (HbA1c) in 60 African Americans with type 2 diabetes (T2D) after 3 months
- Participants stratified by HbA1c (8-10%, $\geq 10\%$), then randomized to frequency of financial incentives (all limited to \$300): **Low** (HbA1c drop), **Moderate** (+ glucose measurement uploads), **High** (+ education session attendance)
- In each group, HbA1c drop was statistically and clinically significant:

Group	Mean Drop in HbA1c	p-value
Low Frequency	- 1.25%	0.002
Moderate Frequency	- 1.73%	<0.001
High Frequency	- 1.74%	<0.001

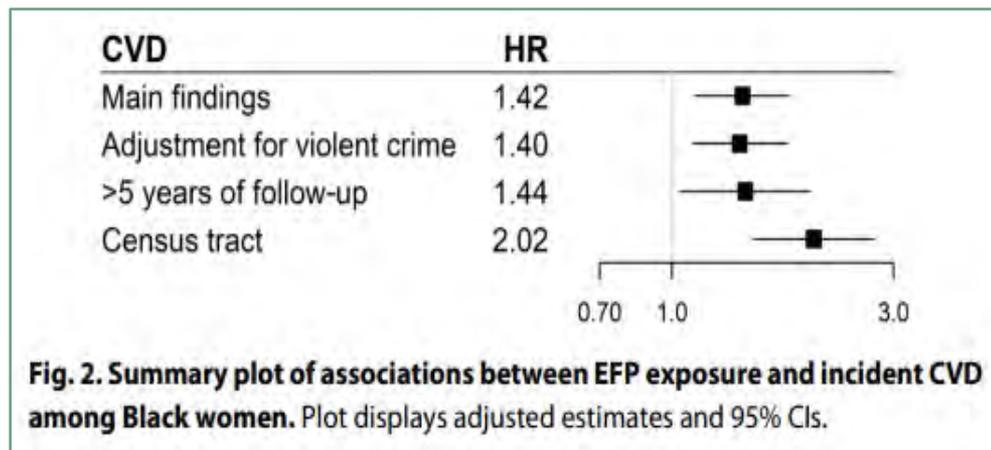
Table 1. Clinical outcome (3-month mean drop in HbA1c) by incentive group

- Moderate/High groups had larger HbA1c drops, indicating more frequent/smaller incentives may be more effective than larger/less frequent incentives



Neighborhood Complaints of Excessive Police Force Associated with Increased Rates of Preterm Delivery and CVD Among Black Women

- The stress associated with living in a neighborhood where excessive use of force by police is common may contribute to disparities in preterm delivery (PTD) and cardiovascular disease (CVD) among Black women
- Study linked formal complaints of excessive police force in women's neighborhoods with EHR-derived health outcomes in pregnancy ($N=67,976$) and CVD cohorts ($N=6,773$)
- Black women exposed to police violence were 1.19 times more likely to experience PTD [95% CI: 1.04 to 1.35] and 1.42 times more likely to develop CVD (95% CI: 1.12 to 1.79), after adjustment for neighborhood disadvantage and homicide
- Police violence may contribute to health inequalities among pregnant Black women



Protective Effects of Breastfeeding on Cardiovascular Health

- Study examined associations of breastfeeding duration (<6 months, 6-11 months, currently breastfeeding at 12 months) with maternal lipids (triglycerides [TG], high-, and very low-density lipoprotein cholesterol [HDL-C, VLDL-C]) measured at 12 months postpartum in the MADRES cohort, a predominantly low-income Latina women (N=79) in LA, CA
- Women breastfeeding at 12 months (n=27) (compared to <6 months, n=24) had higher HDL-C, lower TG, and lower VLDL-C
- No lipids difference found between women who breastfed 6–11 months and <6 months
- Protective effects of breastfeeding may continue over time
- Findings suggest that more research is needed to examine the protective effects of breastfeeding on long-term cardiovascular health among low-income Hispanic/Latina women



Racial and Ethnic Disparities In Use of Pediatric Acute Asthma Care

- Observational study using EHRs in 41,276 children, age 3-17 y with asthma from 18 states
 - Spanish-preferring Latino children had higher odds (OR=1.10) of clinic visits, for asthma exacerbation
 - Black children had lower use of clinics and higher odds of ED asthma-related care (OR=1.40) among Oregon-Medicaid
 - No inpatient admission differences
- Other factors beyond affordability may influence disparities in pediatric acute asthma care utilization:
 - Wealth gap, cultural affinity in CHCs, varying segregation effects
- Findings underscore the multi-faceted nature of minority health and health disparities



Lay Health Worker Intervention to Help Improve Care and Clinical Trial Participation Among Low-Income and Minority Adults with Cancer

- Prospective quality improvement intervention among 66 adults from low-income households with newly diagnosed cancer conducted from 10/15/16, to 2/28/17
- The intervention was associated with
 - ✓ Improvements in goals of care documentation, HRQoL, and better end-of-life care compared to 72 in control group
 - ✓ Improvements in clinical trial participation among historically excluded populations
- Partnering with and enhancing the capacity of community-based organizations through community health workers to improve supportive cancer care delivery and clinical trial participation among historically excluded populations and advance equity

Grant No. K23MD013474

Variable, No. (%)	Intervention Group (n = 66)	Control Group (n = 72)	P-Value
Goals of care documentation	62 (94)	26 (36)	< .001
Advance directive documentation	55 (83)	12 (17)	< .001
Cancer clinical trial participation	38 (72)	11 (22)	< .001
Palliative care	30 (45)	11 (15)	< .001
Hospice	29 (44)	5 (7)	< .001
Death within 6 months	15 (22)	22 (31)	.30
Palliative care in persons died	15 (100)	3 (14)	.03
Hospice in persons died	15 (100)	5 (7)	< .001

Patel, M., et al., [JCO Oncology Practice](#). Nov 2021.



COVID-19 Vaccine Hesitancy Among African Americans Living in the South

Examined factors associated with COVID-19 vaccine hesitancy among a sample of African Americans living in the southern U.S.

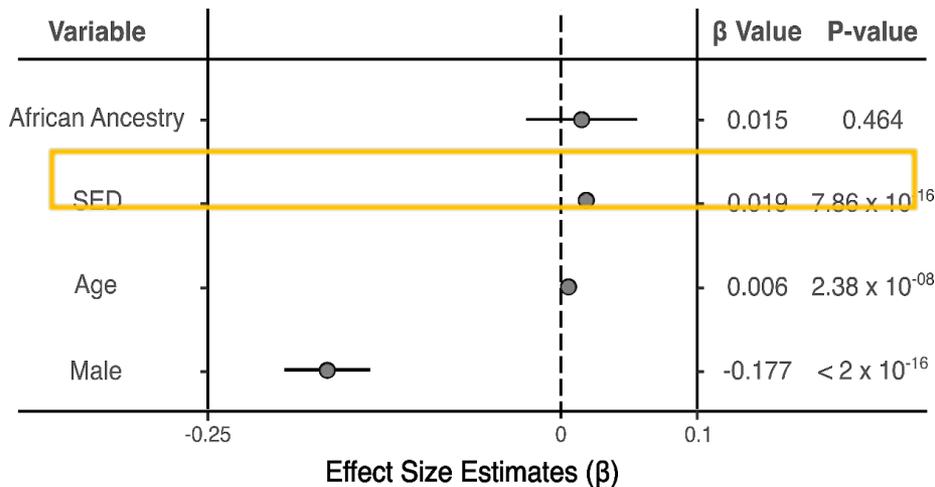
- Cross-sectional survey data from adults (18+ years) old from the Central Savannah Area (N=257)
- Nearly one-third were hesitant or resistant to receiving a COVID-19 vaccine — more likely to be < 30 years or experiencing housing insecurity
- Factors contribute to vaccine hesitancy among young African American populations
- Health systems need to highlight the benefits of COVID-19 vaccine immunity to hesitant populations



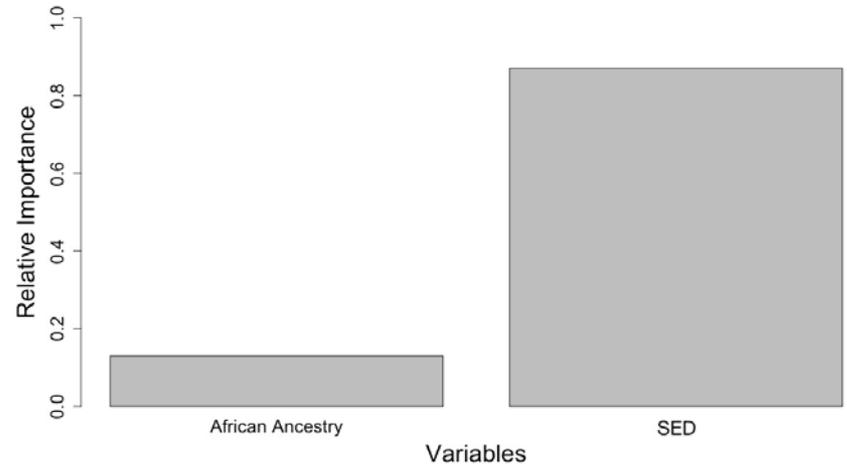
Environment More Important than Genetic Ancestry in Shaping Ethnic Disparities in Inflammation (C-Reactive Protein, CRP), UK Biobank

- Ethnic differences in inflammation (CRP) are explained by Townsend socioeconomic deprivation index (SED)

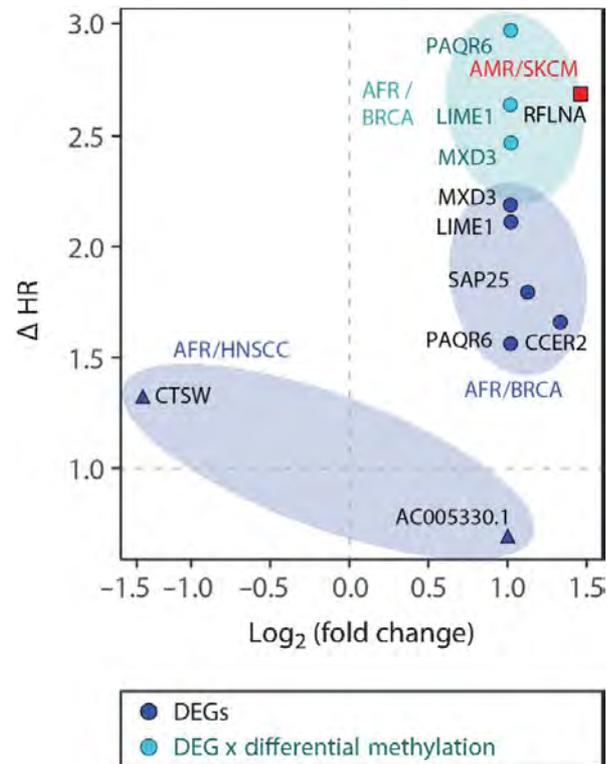
$$\text{CRP} \sim \text{Ancestry} + \text{SED} + \text{Sex} + \text{Age}$$



Relative importance of African ancestry and SED on CRP levels



Changes in Gene Expression Mediated by Epigenetic Mechanisms have a Greater Contribution to Cancer Survival Disparities than Group-specific Genetic Variants



Survival ~ Expression
+ Ancestry +
Methylation +
(Expression x
Ancestry)

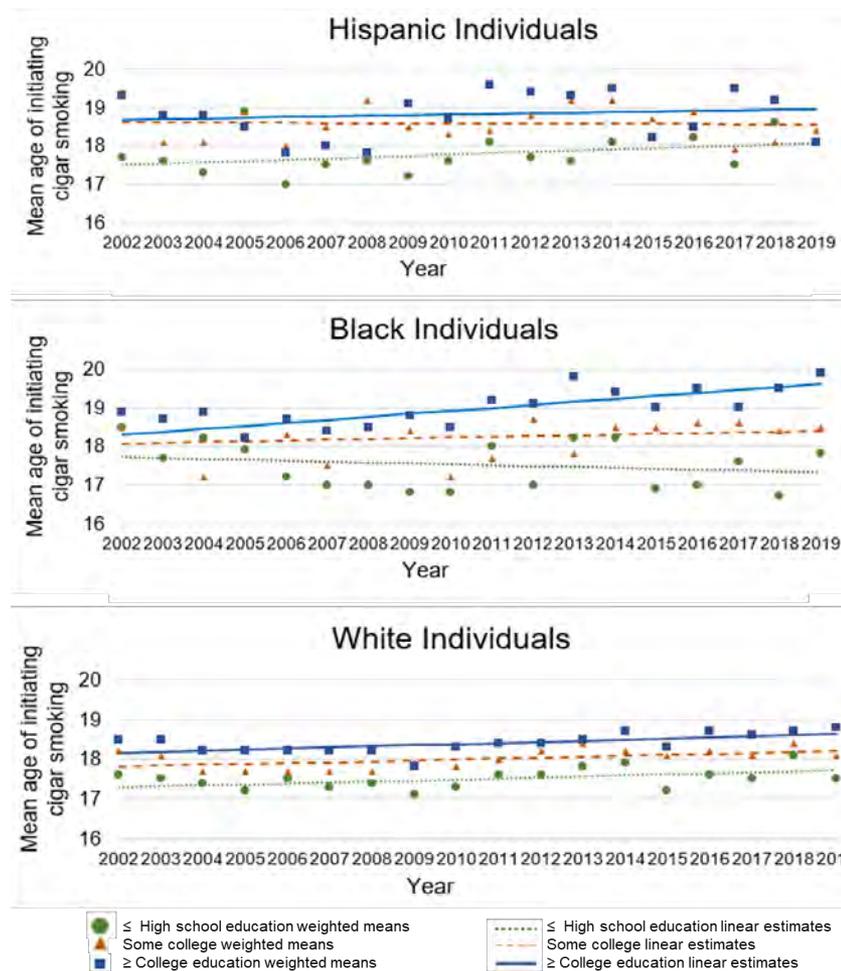
Survival ~ Expression
+ Ancestry +
(Expression x
Ancestry)

❖ Significant effects of **methylation** and **methylation-associated expression-by-ancestry** interactions on survival



Increasing Education-Related Disparities in Cigar Smoking Age of Initiation Among Black Individuals, 2002-2019, NSDUH

- Cigar smoking initiation age-sequential cohorts of 24- to 25-year-olds, National Survey on Drug Use and Health
- Latinos - no changes in age of cigar smoking initiation over time regardless of education
- Blacks-with-college-degree initiated cigar smoking at an older age, but no change in those with less than a college degree



Grant #: ZIA MD000006

Phan, L., et al., in-press, Am J Prev Med



Breast Cancer Screening: Women Born in the U.S. vs. Foreign-Born Women

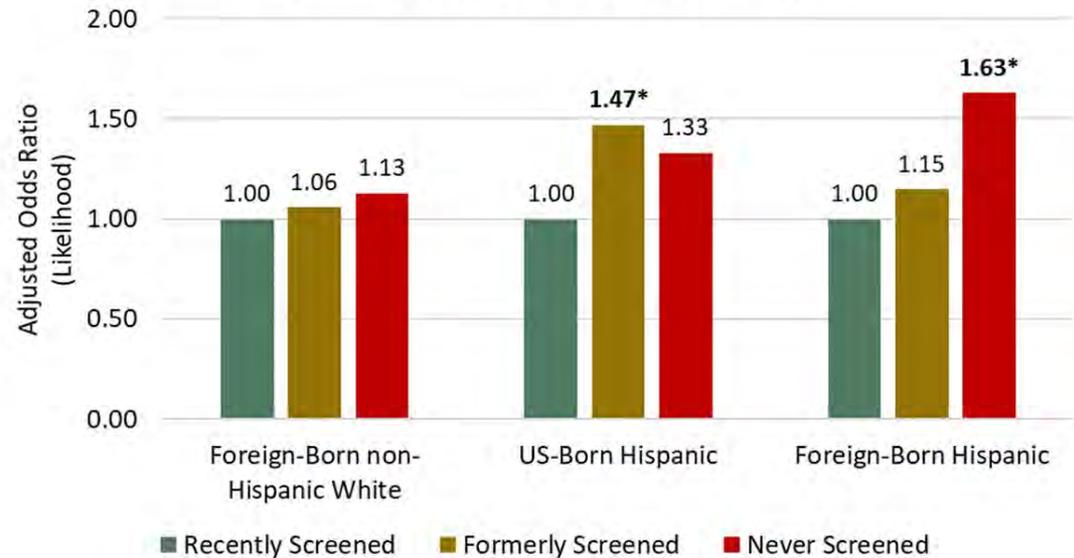
NIEHS Sister Study, N=44,525

Women ages 35–74 whose sister had breast cancer

- Examined combined effect of birthplace and race/ethnicity on screening habits of women at higher-than-average risk of breast cancer
- Screened ≤ 2 years, > 2 years ago, Never screened
- Foreign/U.S. born, race/ethnicity and adjusted for SES, and health behaviors
- Most were U.S.-born White women (92%), and had one first-degree female relative with breast cancer (73%)

Grant No. ZIA MD000006

Screening by Nativity and Race/Ethnicity



Ref. Recently Screened US-Born non-Hispanic White Women; * $p < 0.05$ Statistically significant

Study highlights importance of considering birthplace and cultural factors in preventive and educational strategies to enhance screening among immigrants in the U.S.

Talham, C., et al., [Cancer Medicine](#). April 2022



2022 NIH Postbaccalaureate Poster Day NIMHD Research Trainees



Postbac Presenters

Top Row: Chelsea Truong, Camryn Edwards, Cameron Ormiston, Koya Ferrell, Stephanie Ponce, Kiana Hacker

Bottom Row: Stephanie Quintero, Phillip Hegeman, Charlotte Talham, Judy Nanaw, Kevin Villalobos, Miciah Wilkerson, Gabrielle Zuckerman



DIR Awards and Honors

Stephanie Quintero, Postbac Fellow

- Received a Meritorious Award from the Society of Behavioral Medicine
- *“Race/Ethnicity-Specific Associations Between Breastfeeding Information Source and Breastfeeding Rates”*



Jamie Ko, Medical Research Scholars Program Fellow

- Selected as Best Student Poster Award Finalist for the AcademyHealth Annual Research Meeting
- *“Effect of COVID-19 and COVID-Related Policies on Traumatic Injury Hospitalizations and Trauma Disparities in North Carolina, 2019-2020”*



Lilianna Phan, Ph.D., Postdoctoral Fellow

- Featured in American Public Health Association Alcohol, Tobacco and Other Drug Section Member Spotlight



NIMHD Vacancy Announcements

**JOIN OUR
AMAZING
TEAM!**

NIMHD seeks outstanding candidates to support our vision of an America in which all populations have an equal opportunity to live long, healthy and productive lives.

Learn more at <https://nimhd.nih.gov/about/employment.html>



<https://nimhd.nih.gov/about/employment.html>



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Discussion